

Appln. No. 09/819,400  
Amdt. dated April 14, 2004  
Reply to Office Action of December 16, 2004

**REMARKS/ARGUMENTS**

Reconsideration of the present application, as amended, is respectfully requested.

The December 16, 2003 Office Action and the Examiner's comments have been carefully considered. In response, the Abstract is amended, claims are cancelled and added, and remarks are set forth below in a sincere effort to place the present application in form for allowance. The amendments are supported by the application as originally filed. Therefore, no new matter is added.

**SPECIES ELECTION**

In the Office Action the Examiner indicates that the application as filed contains claims directed to two patentably distinct species of the claimed invention. A telephone conversation was conducted between Examiner Kim and Applicant's attorney, Robert Michal, on December 4, 2003 wherein a provisional election was made without traverse to prosecute the invention of Species A, claims 1-5 and 11-15. Applicant hereby affirms the election of Species A, claims 1-5 and 11-15.

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#### CLAIM OBJECTIONS

In the Office Action claims 1-5 and 11-15 are objected to under 37 CFR 1.75(a) as failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In response, claims 1-5 and 11-15 are cancelled, thereby rendering the objection under 37 CFR 1.75(a) moot.

#### REJECTION UNDER 35 USC 112

In the Office Action claims 1-5 and 11-15 are rejected under the second paragraph of 35 USC 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In response, claims 1-5 and 11-15 are cancelled, thereby rendering the rejection under the second paragraph of 35 USC 112 moot.

#### PRIOR ART REJECTIONS

In the Office Action claims 1-3, 5, 11-13 and 15 are rejected under 35 USC 102(b) as being anticipated by USP 5,270,530 (Godlewski et al.). Claims 4 and 14 are rejected under 35 USC 103 as being unpatentable over Godlewski et al.

In response, claims 1-5 and 11-15 are cancelled. New claims 21-35 are added.

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New claim 21 is directed to a medical image processing apparatus which includes a feature vector producing section to analyze radiation image data including radiographed object image data corresponding to a radiographed object with plural different analyzing methods, to extract plural different features of the radiographed object image data and to produce a radiographed object image data feature vector constructed with vector elements of the extracted plural different features. The medical image processing apparatus also includes a body part feature vector memorizing section to memorize plural body part feature vectors of plural different body parts in advance, and a discriminating section to obtain a correlation degree between the radiographed object image data feature vector and each of the plural body part feature vectors and discriminate a body part corresponding to the radiographed object image data on the basis of the correlation degree for each of the plural different body parts.

The feature vector producing section corresponds to the feature extracting means 312 of Fig. 1, the body part feature vector memorizing section corresponds to the object information memorizing means 360 of Fig. 1, and the discriminating section corresponds to the correlation result comparing means 330 of Fig. 1.

As mentioned at page 29, lines 14-24 of the present application, the feature vector producing section (feature extracting means 312) extracts plural different features such as the size of the radiographed object region, the shape, the shape of the density profile, the shape of the center line of the radiographed object region, the distribution of edges derived from the neighborhood pixels and so on. The feature vector producing section then produces a radiographed object image data feature vector P constructed with vector elements of the extracted plural different features (see the present application at page 30, lines 1-2 and page 58, line 10 to page 59, line 6).

The body part feature vector memorizing section (the object information memorizing means 360) memorizes a plurality of body part feature vectors S of a plurality of different body parts in advance (see the present application at page 59, lines 8-13).

The discriminating section (the correlation result comparing means 330) calculates the degree of correlation between the radiographed object image data feature vector P and body part feature vectors S (see the present application at page 61, line 23 to page 62, line 4), and discriminates a body part correspond-

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ing to the radiographed object image data on the basis of the correlation degree for each of the plural different body parts (see the present application at page 68, lines 18-22).

As a result, according to the present claimed invention, the name of the body part of the radiographed object can be discriminated from the radiographed object image data without being manually input by a radiologist as taught in Godlewski et al. (see page 4, line 22 to page 5, line 2 of the present application).

In the Office Action (see page 6 thereof) the Examiner makes reference to column 4, lines 24-28 of Godlewski et al. and contends that Godlewski et al. disclose a discriminating means for discriminating at least one of a body part of the object and a radiographing orientation (position of patient) for a radiation image formed by the radiation image forming means.

However, Godlewski et al. merely teach that the examination information including a body part can be obtained by scanning a bar code chart that is usually attached to the X-ray generator. See Godlewski et al. at column 4, lines 24-28) which states:

Exam related information can be scanned from  
a bar code chart that is usually attached to  
the portable x-ray generator. Such information

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includes body part type, x-ray exposure  
conditions, position of patient and the like.

That is, Godlewski et al. do not disclose, teach or suggest  
a discriminating section to discriminate a body part from  
radiation image data as defined by new claim 21.

The present claimed invention as defined by new claim 21 is  
patentable over Godlewski et al. because the reference does not  
disclose, teach or suggest a medical image processing apparatus,  
including:

a discriminating section to obtain a correlation degree  
between the radiographed object image data feature vector and  
each of the plural body part feature vectors and discriminate a  
body part corresponding to the radiographed object image data on  
the basis of the correlation degree for each of plural different  
body parts (see claim 21, lines 13-18).

None of the other references of record close the gap  
between the present claimed invention as defined by new claim 21  
and Godlewski et al.

In view of the foregoing, claim 21 is patentable over the  
references of record under 35 USC 102 as well as 35 USC 103.

Claims 22-38 are either directly or indirectly dependent on  
claim 21 and are patentable over the cited references in view of

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their dependence on claim 21 and because the references do not disclose, teach or suggest each of the limitations set forth in new claims 21-38.

It is respectfully believed that no additional fees are due for the presentation of claims 21-38. The application after entry of this Amendment will include one (1) independent claim and eighteen (18) total claims, which are less than the highest number of claims for which payment was previously made. However, if any additional fees are due, please charge our Deposit Account No. 06-1378 for such sum.

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If the Examiner disagrees with any of the foregoing, the Examiner is respectfully requested to point out where there is support for a contrary view.

Entry of this Amendment, allowance of the claims, and the passing of this application to issue are respectfully solicited.

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If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,



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Encl.: Petition for Extension of Time